[redacted]

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

SOLAS OLED LTD. Plaintiff, v. SAMSUNG DISPLAY CO., LTD., SAMSUNG ELECTRONICS CO., LTD., AND SAMSUNG ELECTRONICS AMERICA, INC., Defendants.	Civil Action No. 2:19-cv-00152-JRG [redacted]

DEFENDANTS SAMSUNG DISPLAY CO., LTD., SAMSUNG ELECTRONICS CO., LTD., AND SAMSUNG ELECTRONICS AMERICA, INC.'S MOTION FOR SUMMARY JUDGMENT OF: (1) NONINFRINGEMENT OF THE '311 PATENT AND (2) NO ACTUAL REDUCTION TO PRACTICE OF THE '311 PATENT

[redacted]

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Defendants[1] respectfully submit that they are entitled to summary judgment of: (1) no infringement of U.S. Patent No. 9,256,311 ("the '311 patent") under the Court's claim construction; and (2) no actual reduction to practice of the asserted claims of the '311 patent.[2]

To obtain the '311 patent, the applicants overcame repeated prior art rejections by adding a crucial limitation to all independent claims: "the substantially flexible substrate and the touch sensor are configured to wrap around one or more edges of a display." The parties disputed the meaning of this limitation in *Markman* proceedings, and the Court construed it. Undisputed facts establish that the accused products do not have a touch sensor "configured to wrap around one or more edges of a display" under the Court's construction, and therefore do not infringe any asserted claim. Solas advances no infringement argument consistent with the Court's construction. Instead, Solas bases its infringement accusations on an improper theory that conflicts with the Court's construction, the disclosures of the '311 patent, and Solas's own prior arguments. Summary judgment of noninfringement should therefore be entered.

In addition, Solas has failed to adduce evidence that could support its assertion of actual reduction to practice. Solas did not produce any physical prototype of the claimed invention, nor any corroborating evidence that a prototype was successfully tested and shown to work for its intended purpose when "configured to wrap around one or more edges of a display" under the Court's construction. This is not surprising, as the named inventors testified that [redacted]. Summary judgment should be entered that Solas cannot show actual reduction to practice of the claimed invention.

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[1] While this brief refers to Samsung Display Co., Ltd., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. jointly as "Defendants" for convenience, each is a separate entity that performs different roles as to the manufacture and sale of the Accused Products.

[2] Defendants are separately moving to strike Solas's expert's arguments of an alleged priority date before October 2011, which were not timely disclosed to Defendants during discovery.

[redacted]

I. STATEMENT OF THE ISSUES TO BE DECIDED (L.R. CV-56(a)(1))

1. Whether summary judgment of noninfringement should be entered because no accused product meets the claim limitation required by each asserted claim that "the substantially flexible substrate and the touch sensor are configured to wrap around one or more edges of a display" under the Court's claim construction.

2. Whether summary judgment of no actual reduction to practice before the filing date of the '311 patent should be entered where Solas has offered no corroborating evidence that a prototype allegedly meeting the claims was ever tested or otherwise shown to be suitable for its intended use before the filing date of the '311 patent.

II. STATEMENT OF THE UNDISPUTED MATERIAL FACTS (L.R. CV-56(a)(1))

1. Independent claims 1 ("[a]n apparatus") and 7 ("[a] device") of the '311 patent, on which all other asserted claims depend, each require:

- "a substantially flexible substrate";
- "a touch sensor disposed on the substantially flexible substrate"; and
- "wherein the substantially flexible substrate and the touch sensor are configured to wrap around one or more edges of a display."

(Dkt. 1-2 ('311 patent) at 8:61–9:7, 9:33–46).

2. The Court construed the term "configured to wrap around one or more edges of a display" to mean "configured to wrap around one or more intersections between two or more surfaces of a display." (Dkt. 99 (CC Mem. & Order) at 28).

A. Undisputed Material Facts Related to Defendants' Motion for Summary Judgment of Noninfringement

1. Each of the products accused of infringing the '311 patent includes a display panel integrated with an internal touch sensor referred to as "Y-OCTA" ("YOUM On-Cell Touch

AMOLED"). Ex. 1 (Credelle Op. Rep.) at ¶¶ 8, 68; Ex. 2-1 (Sierros Reb. Rep.) at ¶¶ 91, 152.

2. The Y-OCTA displays incorporated into each of the accused products are manufactured . Ex. 3 (Won-Kyu Kwak Tr.) at 133:20–134:2); Ex. 4 (Credelle Tr.) at 463:18-23 (" "); Ex. 2-1 (Sierros Reb. Rep.) at ¶ 53.

3. . Ex. 1 (Credelle Op. Rep.) at ¶ 141; Ex. 2-1 (Sierros Reb. Rep.) at ¶ 156. . Ex. 2-1 (Sierros Reb. Rep.) at ¶ 156.

4. In each of the accused product models other than the Galaxy Z Flip, the flexible Y-OCTA display is adhered to the underside of a glass cover window that has a flat center and downwards curvature on either end. Ex. 4 (Credelle Tr.) at 322:1–323:14; Ex. 1 (Credelle Op. Rep.) at ¶ 144 ("After the touch sensor fabrication is completed, the touch sensor and panel assembly is laminated to a curved window surface"); Ex. 2-1 (Sierros Reb. Rep.) at ¶ 158.

5. In the Galaxy Z Flip product, the flexible Y-OCTA display is adhered to the underside of a flat flexible glass cover window that can be folded in half such that the glass surfaces touch one another. Ex. 5 (Ex. A-24 to the Credelle Op. Rep.) at 4–5. Because the touch sensor is located between the display and the glass, the display folds around the touch sensor when the phone is folded. Ex. 4 (Credelle Tr.) at 461:24–462:3; Ex. 2-1 (Sierros Reb. Rep.) at ¶ 248.

B. Undisputed Material Facts Related to Defendants' Motion for Summary Judgment of No Actual Reduction to Practice

1. Solas's technical expert, Thomas Credelle, argues that the claimed invention of the

[redacted]

'311 patent was actually reduced to practice "no later than July 8, 2011" based on [redacted] Ex. 6 (Credelle Reb. Rep.) at 151–163.

2. Solas has not produced any units or samples of [redacted]. *See* Ex. 7 (O'Riordan Tr.) at 138:17–139:1.

3. The [redacted]. *See* Ex. 6 (Credelle Reb. Rep.) at 158 (referring to [redacted]); Ex. 4 (Credelle Tr.) at 422:7–423:14; Ex. 8 (Yilmaz Tr.) at 202:16–21; 221:7–14.

4. Solas has produced no documentation showing [redacted]. *See* Ex. 4 (Credelle Tr.) at 424:4–11 ("I don't recall any – any documentation that talked specifically about that step of their – of their evaluation").

5. Solas has produced no documentation of testing or test results showing that [redacted] worked for its intended purpose. *See* Ex. 4 (Credelle Tr.) at 424:12–425:9 ("I'm certainly not aware of any specific testing"); Ex. 8 (Yilmaz Tr.) at 220:4–12 [redacted]

6. The named inventors of the '311 patent (Jalil Shaikh and Esat Yilmaz) each testified that neither curved nor flexible displays for touchscreens existed before the October 2011 filing date of the '311 patent. Ex. 9 (Shaikh Tr.) at 151:14–17, 152:9–22, 153:21–154:10, 200:19–201:5; Ex. 8 (Yilmaz Tr.) at 159:1–14; *see also* 171:4–172:3; 174:14–24.

III. LEGAL STANDARDS

"Literal infringement requires that each and every limitation set forth in a claim appear in an accused product." *V-Formation, Inc. v. Benetton Grp. SpA*, 401 F.3d 1307, 1312 (Fed. Cir. 2005). "Summary judgment of noninfringement is appropriate where the patent owner's proof is

deficient in meeting an essential part of the legal standard for infringement, since such failure will render all other facts immaterial." *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1323 (Fed. Cir. 2001).

"To establish an actual reduction to practice, as opposed to the constructive reduction to practice that occurs when a patent application is filed, 'the inventor must prove that: (1) he constructed an embodiment or performed a process that met all the limitations [of the claim]; and (2) he determined that the invention would work for its intended purpose.'" *E.I. du Pont De Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1075 (Fed. Cir. 2019) (citation omitted); *see also Tech. Dev. Corp. v. United States*, 597 F.2d 733, 746–47 (Ct. Cl. 1979) ("An invention is actually reduced to practice when it is put into physical form and shown to be operative in the environment of its practical contemplated use"). "[A]n inventor's testimony alone" is insufficient to prove reduction to practice—"some corroborating evidence is required." *du Pont*, 921 F.3d at 1075–76.

"Depending on the character of the invention and the problem it solves," showing "that the invention is suitable for its intended purpose . . . may require test results." *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1578 (Fed. Cir. 1996); *see Estee Lauder Inc. v. L'Oreal, S.A.*, 129 F.3d 588, 594–95 (Fed. Cir. 1997) ("[W]hen testing is necessary to establish utility, there must be recognition and appreciation that the tests were successful for reduction to practice to occur"). While "[l]ess complicated inventions and problems do not demand stringent testing," even inventions that are "so simple and their purpose and efficacy so obvious" require "their complete construction . . . to demonstrate workability." *Mahurkar,* 79 F.3d at 1578.

IV. ARGUMENT

A. Solas cannot show that any of the products accused of infringing the '311 patent satisfy the "configured to wrap around one or more edges of a display" limitation found in all of the asserted claims of the '311 patent.

All of the asserted claims of the '311 patent require a "substantially flexible substrate" and

[redacted]

a "touch sensor" that are each "configured to wrap around one or more edges of a display." (Dkt. 1–2 ('311 patent) at 8:62–9:7). The Court construed the "configured to" limitation to mean "configured to wrap around one or more intersections between two or more surfaces of a display." (Dkt. 99 (CC Mem. & Order) at 28). In reaching this construction, the Court explained that "the patentee distinguished between wrapping around an 'edge' and wrapping around 'a pebble-shaped or curved device,'" with "'pebble shaped or curved device' … being an example in which 'there is no substantial distinction between surfaces.'" (Dkt. 99 at 27 (citing '311 patent at 7:55–65 and 7:62–64.)) However, no accused product has a touch sensor that is configured to wrap around an edge of a display, i.e., around one or more intersections between two or more surfaces of a display.

The touch sensor in the accused products is [redacted]. In all accused products besides the Galaxy Z Flip, the display has a curved or pebble shape with a single surface, and no substantial distinction between surfaces as would be required for an "edge." Because the touch sensor is entirely on top of the display, where there are not two or more surfaces, the touch sensor cannot wrap around an intersection between two or more surfaces of the display as required by the Court's construction. The Galaxy Z Flip is a new design having a flat flexible glass cover window which can be folded in half (as a flip phone). The touch sensor is located between the display and the glass cover window, and when the phone is folded, the OLED display wraps around the touch sensor. The touch sensor is never wrapped around the display as required by the '311 patent's claims. Thus, the Galaxy Z Flip cannot infringe any claim of the '311 patent.

1. The accused products have a touch sensor on an OLED display with a single curved surface, not substantially distinct surfaces, and do not practice the "configured to wrap around one or more edges of a display" limitation under the Court's construction.

Solas's infringement theory misapplies the Court's construction, attempting to revive

[redacted]

arguments the Court rejected. During claim construction, Solas argued that the limitation "configured to wrap around one or more edges of a display" should be read to encompass embodiments in "which the touch-sensitive sensor may be 'wrapped around a curved surface,'" such as "edges with 'no substantial distinction between surfaces (such as for example, a pebble-shaped or curved device).'" (Dkt. 74 at 29). The Court rejected this argument, because "the patentee distinguished between wrapping around an 'edge' and wrapping around 'a pebble-shaped or curved device.'" (Dkt. 99 at 27 (citing '311 patent at 7:55–65)). In construing the term "configured to wrap around one or more edges of a display" to mean "configured to wrap around one or more intersections between two or more surfaces of a display," *id.* at 28, the Court made clear that devices having an edge are distinguished from curved or pebble-shaped devices, as the latter having are "an example in which there is no substantial distinction between surfaces," *id.* at 27. *See id.* ("The disputed term should therefore be construed in accordance with this distinction…."). Yet Solas now misapplies the Court's construction to try to read the claims to cover the very curved and pebble-shaped devices the '311 patent distinguished and did *not* claim.

All of the products accused of infringing the '311 patent contain a flexible Y-OCTA display panel that, [redacted] Ex. 3 (Won-Kyu Kwak Tr.) at 133:20–134:2; Ex. 4 (Credelle Tr.) at 463:18–23; Ex. 2-1 (Sierros Reb. Rep.) at ¶ 53. The touch sensors are formed as [redacted]. Ex. 2-1 (Sierros Reb. Rep.) at ¶ 156. Setting aside the Galaxy Z-Flip, which Defendants separately address in Section IV.A.2 below, in all accused products the touch sensor and display panel are later adhered to a glass cover window that has a flat center and downwards curvature on either end. Ex. 4 (Credelle Tr.) at 322:1–323:14; Ex. 1 (Credelle Op. Rep.) at ¶ 144; Ex. 2-1 (Sierros Reb. Rep.) at ¶ 158. The adhesion results in the surface of the flexible Y-OCTA display panel, and the integrated

touch sensor, conforming to the curvature of the surface of the glass cover window above. Ex. 4 (Credelle Tr.) at 322:1–323:14. This is shown, for example, in the schematic diagram for the display module found in the accused Galaxy S8 model:

Ex. 10 (cross-section from SDC0174417) . The displays in the accused products are thus curved, or pebble-shaped, displays consisting of a single surface with slight curvature at either end. There is no side wall of the display. The touch sensor is located entirely on the top surface of the display, and does not "wrap around" any "intersection between two or more surfaces" of the display.

To assert infringement, Solas advances a new interpretation of an "edge" inconsistent with the Court's construction, the disclosures of the '311 patent, and Solas's own prior positions. Solas now posits that any curved region, and any region where curvature differs, constitutes its own separate "surface." *See, e.g.*, Ex. 4 (Credelle Tr.) at 399:3–401:25; *id.* at 368:6–369:3. Thus, according to Solas's expert, wherever a flat region starts to curve, there is purportedly an "intersection" between two or more "surfaces": one being the flat "surface," and the other being the so-called "curved surface." *See* Ex. 1 (Credelle Op. Rep.) at ¶¶ 144, 147:

[redacted]

Id. at 74 (red annotations added by Solas's expert); *see* Ex. 4 (Credelle Tr.) at 399:3–401:25 (stating that an "intersection between distinct surfaces" occurs "any time that a flat region starts to curve"). Solas uses this new notion—that any change in curvature, however slight, creates a separate alleged "surface"—to argue that the single surface of the display in the accused products is purportedly *three* separate "surfaces" (i.e., a "curved surface" on the left side, a "flat surface" in the middle, and a "curved surface" on the right side) with two "intersections" between them." *See* Ex. 1 (Credelle Op. Rep.) at ¶ 147, Ex. 4 (Credelle Tr.) at 399:3–401:25.

Solas's theory is inconsistent with the Court's construction, and the '311 patent, in two fundamental ways. *First*, Solas's new interpretation that any curved region constitutes a separate "surface" contradicts the Court's opinion and the '311 patent's disclosure of "sharper edges" and, by implication, non-sharper edges that are also curved. Under Solas's new interpretation, there could be no such thing as a curved edge, whether a "sharper edge" or a less–sharp edge. *Second,* Solas's new interpretation would read the claims to cover wrapping around curved and pebble-shaped devices (i.e., devices in which there is no substantial distinction between surfaces), when the Court explained that the '311 patent explicitly distinguished wrapping around curved and pebble-shaped devices from the claimed wrapping around of "edges."

a) Solas's theory is inconsistent with the '311 patent's disclosure of curved edges.

The '311 patent explains that an edge—i.e., the intersection between two surfaces—*itself* may be curved. In its claim construction opinion, the Court cited the patent's disclosure of "'sharper edges' having a particular radius of curvature," which the Court explained weighed against interpreting "edges" as "referring to 'line segments' at an intersection" (which is effectively what Solas is now attempting, as discussed *infra* at n.3). (Dkt. 99 at 27). In particular, the '311 patent makes clear that "edges" may be curved: there may be (1) "sharper edges" between

surfaces "with radii of less than 1 mm"; or (2) less-sharp, or more rounded, edges between surfaces with a radius of 1 mm or greater. (Dkt. 1–2 ('311 patent) at 7:52–55). In either case, the "edge" ***itself*** may be a curved area separating two surfaces. Solas emphasized this very point in its claim construction submissions. (Dkt. 82 at 10) ("[V]ertical and horizontal line segments are the 'flat portions of surface' view end on, and ***the curved portion between them with radius of curvature r is the 'edge'***") (emphasis added); (Dkt. 74 at 28–29) ("[A] POSITA would have understood that non-sharper edges—namely, those with a radius of curvature substantially greater than 1 mm—were also clearly within the scope of the patent's teachings"); *see also* Ex. 11 (*Markman* Tr.) at 13:14–15 ("The patent also teaches that there are sharper edges, and there are non-sharp edges."); *id*. at 36:2–5 ("[T]hat indicates that less sharp edges are also covered.").

Yet under Solas's new interpretation, the curved edges of the '311 patent could not exist; Solas would render them an impossibility by defining the curved region as being its own separate "surface," which means that an *intersection* between two or more surfaces cannot be located within that curved region as the '311 patent teaches.[3] Moreover, in dubbing the curvature as a separate "surface" of its own, Solas is interpreting "surface" in a manner inconsistent with the '311 patent: what the '311 patent describes as two surfaces (a horizontal surface and a vertical surface, which are connected by the curved edge) would be recast by Solas as being *three* surfaces (the horizontal and vertical surfaces, plus what Solas would call a "curved surface"). *See, e.g.*, Ex. 5 (Ex. A-24 to the Credelle Op. Rep.) at 5. Solas's interpretation contravenes the '311 patent in additional ways as well: it (1) *moves* where the "edge" is located, from being within the curved region to a line segment drawn where the flat region starts to curve; and (2) treats what in the '311 patent is a

[3] Indeed, even though the Court rejected that "edge" be construed as a "line segment," Dkt. 99 at 27, under Solas's new interpretation, an "edge" could *only* be a line segment, not a curved area.

single edge between horizontal and vertical surfaces as being *two edges*—first, where the horizontal surface starts to curve downwards (which Solas now calls an intersection with a "curved surface"), and second, where the downward curvature (i.e., the so-called "curved surface") intersects with the vertical surface.

Thus, Solas and Mr. Credelle's new theory—that an "edge" (i.e., an intersection between two or more surfaces) is created wherever a flat surface begins to curve, *see* Ex. 4 (Credelle Tr.) at 399:3–401:25, and also wherever a surface's radius of curvature changes, *see id.* at 368:6–369:3—would render impossible the rounded "edges" described in the '311 patent and cited by the Court in its order, (Dkt. 99 at 27). Because any change in curvature would constitute a separate "surface" under Solas's new theory, an "edge" with any radius of curvature between two flat surfaces, as expressly described by the '311 patent, could not exist.

Moreover, the '311 patent itself indicates that a single surface may have flat portions and curved portions. The patent states "For sharper edges (e.g., with radii of less than 1 mm), the flexible conductive material … may be thicker or wider at the sharper edges than ***at the flat portions of surfaces***." (Dkt. 1–2 ('311 patent) at 7:52–55) (emphasis added). The reference to "flat *portions* of surfaces" implies that a single surface may have both flat and non-flat (*i.e.*, curved) portions—contrary to Solas's new theory that any curvature defines a separate "surface" and that an "intersection between two or more surfaces" exists wherever a flat portion begins to curve.

Solas's new interpretation thus contravenes the Court's construction, the disclosures of the '311 patent, and Solas's own prior arguments to the Court.

b) Solas's theory is inconsistent with the '311 patent's distinction between devices having edges and curved or pebble-shaped devices.

Mr. Credelle's and Solas's new interpretation would also contravene the Court's construction and the '311 patent by treating "curved devices" and "pebble-shaped devices" as

having edges, when the patent expressly distinguished devices having an "edge" from devices that are curved or pebble-shaped, i.e., devices in which there is no substantial distinction between surfaces. As the Court explained in its claim construction opinion, the '311 patent distinguished "between wrapping around an 'edge' and wrapping around 'a pebble-shaped or curved device,'" and "[t]he disputed term should therefore be construed in accordance with this distinction . . . ." (Dkt. 99 at 27 (citing '311 patent at 7:55–65)). Yet because curved devices and pebble-shaped devices contain changes in curvature, Mr. Credelle and Solas would characterize them as having "edges"—i.e., intersections between two or more surfaces. Indeed, to assert infringement, they specifically read the claims to cover wrapping around a curved or pebble-shaped device.[4]

In fact, Mr. Credelle himself refers to the curved glass cover window of the accused products as a (singular) "curved window surface." Ex. 1 (Credelle Op. Rep.) at ¶ 144; *see also* Ex. 4 (Credelle Tr.) at 314:19–23 ("Q. Do you understand that the Galaxy S8 and the Galaxy S8 Plus have similar curved displays? A. I'm aware that both of these *used curved displays*. I believe the dimensions of the curve are similar."); *id.* at 325:20–326:4 ("[T]he -- the ones I accused are the ones I accused. And they have metal mesh, *and they're curved*. So I can speak to those on Page 53 as being infringing products.") (emphasis added). When asked, "What do you understand to be a curved display in the context of the '311 patent?" Mr. Credelle answered, "I'm really not in the -- in the head of the inventors when they wrote the paragraph at the bottom of Column 7. ***So when they were talking about curved displays, they may have been referring to the type of display that is in the Samsung products.*** They might have been referring to some kind of cylindrical -- cylindrical display with -- with a curved surface. It's – it's hard for me to know exactly what they

[4] Under Solas's theory, an egg would be said to have multiple edges and surfaces because its radius of curvature changes. Of course, however, an egg is an example of a curved surface.

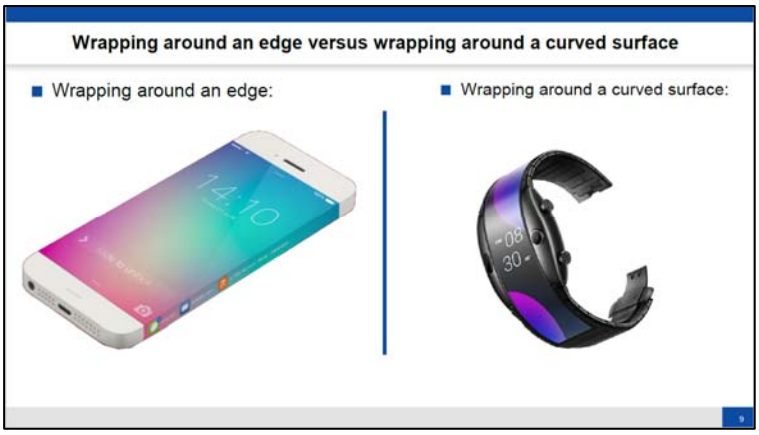
[redacted]

were thinking when they wrote that spec." *Id.* at 364:3–15 (emphasis added).

The inventors of the '311 patent have likewise characterized a sensor having flat surface with curvature at the sides—i.e., a shape like the accused products—as being a "curved" sensor:

[redacted]

Ex. 12 (YILMAZ_00000021); Ex. 8 (Yilmaz Tr.) at 221:7–10 (describing [redacted] as [redacted]"). The curved display shown in *Markman* proceedings to illustrate the distinction between a device with "edges" and a "curved" device is also illustrative:

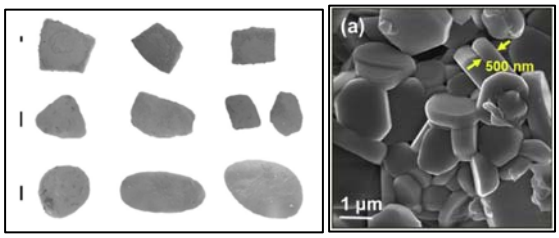


Ex. 13 (Defendants' April 6 *Markman* Hearing Slides) at 9. Under Solas's new theory, the curved watch display would have multiple "edges" (intersections between separate surfaces) because there is a relatively flat region of the display where the numbers on its face are located that "intersects" with more sharply curved regions of the display above and below. Yet during the hearing, Solas's counsel told the Court that in this "curved smartwatch," there is a single curved "surface pointed to the viewer"; he identified the edges as being located at the boundaries of the display—"the edge would be at any – any point where the display ends and some other type of material begins." Ex. 11 (*Markman* Hearing Tr.) at 32:18–34:19 (a first edge "at the bottom . . . where the black felt

[redacted]

wristband starts and the display ends," and a "similar" edge at the top of the display).

Moreover, pebble-shaped devices have flat regions along with curvature, but the '311 patent expressly distinguishes them from devices having an "edge." This distinction was confirmed by named inventor Esat Yilmaz, who explained that [redacted] " Ex. 8 (Yilmaz Tr.) at 54:25–56:2 ("[redacted]"); *see id.* at 63:16–64:6. The images below show such "pebble-like" shapes:



Ex. 2-1 (Sierros Reb. Rep.) at ¶¶ 160–61 (left image from *Shape and Erosion of Pebbles*, D. Durian et al. (Feb. 5, 2007) (SDC0339641); right image from *Long-wave UVA radiation excited warm white-light emitting NaGdTiO4*, L. Krishna Bharat et al. (December 31, 2015) ("particles with pebble-like morphology") (SDC0339647)). Yet under Solas's new theory, the "curved" and "pebble-shaped" devices that the Court explained were explicitly distinguished from devices having "edges," (Dkt. 99 at 27)—and which are not covered by the claims of the '311 patent—would be swept within the scope of the claims. Indeed, Mr. Credelle acknowledged that under Solas's interpretation, "I can imagine defining in most products, maybe not all products, that there would be an intersection between two surfaces that is identifiable, perhaps because of a difference in the radius of curvature . . . ." Ex. 4 (Credelle Tr.) at 368:6–369:3.

Solas's infringement arguments are thus inconsistent with the Court's claim construction opinion and the '311 patent's disclosures. As the Court explained, the '311 patent distinguished pebble-shaped and curved devices—which exemplify devices that *lack* an edge, as "there is no substantial distinction between the surfaces"—from devices that have an edge. (Dkt. 99 at 27

(quoting '311 patent at 7:62–64)). The displays in the accused products, with their curved or pebble shape, do not have substantially distinct surfaces; they have a single, continuous surface on which the touch sensors are formed. Therefore, touch sensors on the surface of the display cannot be said to be "configured to wrap around one or more intersections between two or more surfaces of a display." Solas has not shown, and cannot show, that any of the accused products infringe the '311 patent under the Court's construction.

2. In the Galaxy Z Flip model, when folded up, the OLED display wraps around the touch sensor, and not vice versa as required by the claims.

The accused Galaxy Z Flip product model incorporates a flexible "Y-OCTA" touch panel in which a touch sensor is integrated into an OLED display panel, Ex. 5 (Ex. A-24 to the Credelle Op. Rep.) at 1, with that Y-OCTA touch panel then being adhered to the underside of a flexible glass cover window, resulting in the touch sensor layer being sandwiched between the glass cover window on top and the OLED display underneath, *id.* at 1, 5. The flexible glass cover window (and the flexible Y-OCTA display panel underneath) can be folded up in half, as illustrated in the June 1 report of Solas's technical expert:

Id. at 5. Under Solas's interpretation, the folding up of the Galaxy Z Flip creates two separate "flat surfaces" of the display, as well as "the 'fold' which is the curved surface." *Id.* However, because the touch sensor is located on top of the OLED display panel, folding up the Galaxy Z Flip results in the OLED display (which is on the outside) wrapping around the touch sensor. Ex. 2-1 (Sierros

[redacted]

Reb. Rep.) at ¶ 248; Ex. 4 (Credelle Tr.) at 461:24–462:3. Indeed, Solas's expert, conceded that "[w]hen the display folds, the touch sensor would be on the inside surface of that fold, that's correct." Ex. 4 (Credelle Tr.) at 461:18–23. He confirmed, when asked if he "would agree that it's the display that wraps around the touch sensor in the Z Flip," answered "Yea, one could -- could make that argument," *id.* at 461:24–462:3. As Defendants' expert explains, in the Galaxy Z Flip, the display is configured to wrap around the touch sensor—an entirely different design than a touch sensor configured *to wrap around the display*, as required by the claims. Ex. 2-1 (Sierros Reb. Rep.) at ¶ 248 ("when the Z Flip is folded, the OLED display panel of the Z Flip ***wraps around the Y-OCTA touch sensor*** (not the other way around . . .)") (emphasis in original).

Figure 7 of the '311 patent, which illustrates a touch sensor (612) wrapping around the edge of a display (613), shows the starkly different claimed structure of the '311 patent. Solas and Mr. Credelle do not and cannot point to any disclosure in the '311 patent of a design like the Z Flip, *see* Ex. 4 (Credelle Tr.) at 461:7–14. On the contrary, Mr. Credelle admits "the Z Flip is an innovative display design." *id.* at 461:4–6, one not disclosed or contemplated in the '311 patent, let alone claimed, *see id.* at 461:7–14 (admitting that the '311 patent doesn't "talk about any detail[s] of how the display might be configured").

B. Solas cannot show actual reduction to practice of the claimed invention of the '311 patent prior to the filing date of the '311 patent.

Solas's contention that the claims of the '311 patent were actually reduced to practice on July 8, 2011 relies on [redacted] Ex. 6 (Credelle Reb. Rep.) at 130, 151–63. This alleged July 8 actual reduction to practice date was never disclosed in Solas's discovery responses, nor was the so-called [redacted] relied upon by Mr. Credelle (*id.*) ever disclosed in Solas's P.R. 3-2(b) contentions. Further, there is no evidence corroborating that [redacted] were: (a) tested or suitably

functional for use; or (b) wrapped around one or more edges of a display (as required by the claims). Solas cannot show actual reduction to practice for each of these independent reasons.

1. Even if [redacted] were made in July 2011, there is no corroborating evidence that they were ever tested or shown to be operative.

To show actual reduction to practice, Solas must prove that [redacted] of the claimed invention had been successfully tested at the time of the alleged actual reduction to practice. *Estee Lauder*, 129 F.3d at 594–95. But even assuming *arguendo* that [redacted] by July 8, 2011 (and were identical to those [redacted]), *id.*, there is no corroborating evidence that [redacted] were ever successfully tested or determined to be operative/suitable.

Mr. Credelle describes the [redacted] as [redacted] Ex. 6 (Credelle Reb. Rep.) at ¶ 284 (emphasis added). He bases his opinion that the invention was actually reduced to practice as of July 8, 2011 on [redacted] *id.* at ¶ 268 (emphasis added)—that is, to be tested in the future. But there is no evidence that any [redacted] had been tested (or otherwise shown to be operative) as of July 8, 2011, or any other date prior to the filing date of the '311 patent. Indeed, Mr. Credelle testified, "I'm certainly not aware of any specific testing." Ex. 4 (Credelle Tr.) at 424:12–425:9. The lead named inventor, Esat Yilmaz, confirmed that: [redacted] Ex. 8 (Yilmaz Tr.) at 220:4–12.

2. There is also no corroborating evidence that any [redacted] was "configured to wrap around one or more edges of a display."

In addition, even if there were evidence that the [redacted] on July 8, 2011 *were* functionally operative for their intended purpose (which there is not), "there can be no actual reduction to practice if the constructed embodiment . . . lacks an element recited in the [claim] or

uses an equivalent of that element." *Eaton v. Evans*, 204 F.3d 1094, 1097 (Fed. Cir. 2000). There is no evidence that *any* manufactured before the filing date of the '311 patent was "configured to wrap around one or more edges of a display," as required by each of its claims.

The Court construed this limitation to mean "configured to wrap around one or more intersections between two or more surfaces of a display." (Dkt. 99 at 28). But as confirmed by named inventors Yilmaz and Shaikh, that wrapped around an intersection between a first surface of a display and a second surface of a display, as seen in Figure 7 of the '311 patent—instead, . Ex. 8 (Yilmaz Tr.) at 169:19–170:25); Ex. 9 (Shaikh Tr.) at 120:15–22 ("

Even under Mr. Credelle's and Solas's flawed interpretation of this claim limitation that it can be met by a touch sensor layered on a curved display surface, *see* Ex. 1 (Credelle Op. Rep.) at ¶¶ 144, 147, the named inventors testified that no such displays existed at the time. Ex. 9 (Shaikh Tr.) at 151:14–17, 152:9–22 153:21–154:10), 200:19–201:5 Ex. 8 (Yilmaz Tr.) at 159:1–14 ; *see also* 171:4–172:3 ; 174:14–24.

V. CONCLUSION

Because there is no genuine dispute of material fact as to non-infringement of the '311 patent or actual reduction to practice of the '311 patent before its October 2011 filing date, Defendants respectfully request that the Court grant summary judgment in their favor.

[redacted]

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of the foregoing document via the Court's CM/ECF system per Local Rule CV-5(a)(3) this July 20, 2020.

/s/ Melissa R.Smith
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